

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB 03/04095**

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

☐ complied with.

☒ not complied with for the following reasons:

**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

☐ all parts.

☒ the parts relating to claims Nos. 1-14, 16-28, 34 .

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1, 3-14, 16-28, 34
	No: Claims	
Inventive step (IS)	Yes: Claims	1, 3-14, 16-28, 34
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1, 3-14, 16-28, 34
	No: Claims	

2. Citations and explanations

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

---

International application No. PCT/GB 03/04095

**Re Item I**

1. Due to the lack of unity and the fact that the applicant has neither restricted the claims nor pay additional examination fees, this international preliminary examination report is based on the parts of the present application relating to claims 1-34 only.

**Re Item III**

2. Claim 2 contains references to another patent document. This render the subject-matter of said claim unclear (Article 6 PCT), since it leaves the reader in doubt as to the extent of the scope of protection defined thereby. Consequently, claim 2 has not been subject to this international preliminary examination report.

**Re Item IV**

3. First obvious lack of unity

3.1 The separate groups of inventions are:

I1 : Claims 1-35

A vehicle braking assembly

I2 : Claims 36-38

A vehicle wheel assembly adapted to act as a power generator

I3 : Claim 39

A vehicle braking assembly or wheel assembly substantially as described with reference to the accompanying drawings and examples

- 3.2 They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) since there is no technical relationship among these groups of inventions which could involve one or more of the same or corresponding special technical features (Rule 13.2 PCT).

4. Further lack of unity

- 4.1 The common features of the first group I1 of inventions defined in independent claims 1 and 15 are the features of the preamble of said claims, i.e. a vehicle braking assembly comprising a braking member, blocking means adapted to prevent the braking member from moving and trigger means adapted to activate the braking member.

- 4.2 These common features are commonly well known features for the skilled person and

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/04095

are already disclosed in the documents US-A-5 881 846 (see abstract), EP-A-1 101 685 (see abstract and column 1, lines 32-47) cited in the search report. These common features can therefore not serve as a link between the inventions **I11** and **I12** (see paragraph below) so as to form a single general inventive concept. The requisite unity of invention in the sense of Rule 13.1 PCT therefore no longer exists.

**4.3 The two different inventions **I11** and **I12** are the following:**

**I11 : Claims 1-14, 16-28, 34**

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means being operable by a coded message passed by a separate transmitter

**I12: Claims 15-27, 29-33, 35**

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means comprising a latch adapted to engage with a toothed portion of the body of the wheel

**5. It appears therefore that the application contains four different inventions **I11**, **I12**, **I2** and **I3** which are not linked by a single general inventive concept. These inventions are the following:**

**I11 : Claims 1-14, 16-28, 34**

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means being operable by a coded message passed by a separate transmitter and said assembly being provided with an EMR sensor

**I12: Claims 15-27, 29-33, 35**

A vehicle braking assembly comprising a braking member, blocking means and trigger means, said trigger means comprising a latch adapted to engage with a toothed portion of the body of the wheel

**I2 : Claims 36-38**

A vehicle wheel assembly adapted to act as a power generator

**I3 : Claim 39**

A vehicle braking assembly or wheel assembly substantially as described with reference to the accompanying drawings and examples

**Re Item V**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/04095

The subject-matter of claims 1 and 3-34 satisfy the criteria of novelty, inventive step and industrial applicability. The reasons are the following:

6. Claim 1

- 6.1 The document US-A-5 881 846 (D1) is regarded as the closest prior art to the subject-matter of claim 1 and discloses (see D1: column 2, lines 3-20; column 4, lines 33-42, column 5, lines 10-33, figures 1 and 6-8) a vehicle braking assembly for a wheel, said assembly comprising:

a braking member (20) arranged to move relative to the main body of the wheel (10) between an inoperative and an operative position;

blocking means (22) adapted to prevent the braking member (20) from moving to an operative position (see D1: column 4, lines 38-41); and

trigger means (24) adapted to activate the braking member (20) to move to an operative position;

wherein said trigger means (24) are operable by a coded message passed by a separate transmitter (see figure 7) and said assembly (see column 5, lines 30-34) is provided with an EMR sensor (56).

- 6.2 The subject-matter of claim 1 differs from this vehicle braking assembly for a wheel in that said blocking means is arranged to reset the braking member to an inoperative position without manual interference.

The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).

- 6.3 The problem to be solved by the present invention may therefore be regarded as to simplify the resetting of the braking member to an inoperative position.

- 6.4 The constructive solution defined in claim 1 of the present application is not disclosed in its present form in any of the documents cited in the search report.

Thus, the subject-matter of claim 1 involves an inventive step (Article 33(3) PCT).

7. Dependent claims 3-14, 16-28, 34

Claims 3-14, 16-28, 34 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

8. Further remarks

- 8.1 The last feature of claim 1, i.e. "the blocking means is arranged to reset the braking

## CLAIMS

1. A vehicle braking assembly for a wheel which comprises a braking member arranged to move relative to the main body of the wheel between an inoperative and  
5 an operative position, blocking means adapted to prevent the braking member from moving to an operative position and trigger means adapted to activate the braking member to move to an operative position characterised in that the trigger means is operable by a coded message passed by a separate transmitter as electromagnetic radiation and the assembly is provided with an EMR sensor.  
10
2. A vehicle braking assembly device according to Claim 1 characterised in that the brake foot is the same or similar to that described in European Patent No. 1 101 685.
- 15 3. A vehicle braking assembly device according to Claim 1 characterised in that the wheel is provided with a circumferential brake guide.
4. A vehicle braking assembly device according to Claim 3 characterised in that the circumferential brake guide is in the form of a slot or groove.  
20
5. A vehicle braking assembly device according to Claim 3 characterised in that the brake guide is provided on only a portion of the circumference of the wheel.
6. A vehicle braking assembly device according to Claim 3 characterised in that  
25 the circumferential brake guide is formed by the mating of a pair of facing wheel members.
7. A vehicle braking assembly device according to Claim 3 characterised in that  
30 each of the wheel member comprise a wheel and a wheel body, the diameter of the wheel body being less than the diameter of the wheel.